

## EDITORIAL

## India's Story of Reducing Maternal Mortality - Achievement so far and Commitments Ahead

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In the year 2000, the United Nations (UN) Member States pledged to work towards a series of Millennium Development Goals (MDGs), including the target of a three-quarters reduction in the 1990 Maternal Mortality Ratio (MMR; maternal deaths per 100 000 live births), to be achieved by 2015. This target (MDG 5A) and that of achieving universal access to reproductive health (MDG 5B) together formed the two targets for MDG 5: Improve maternal health. (1)

It has been a challenge to assess the extent of progress towards MDG 5 due to the lack of reliable and accurate maternal mortality data – particularly in developing-country settings, where maternal mortality is high. To assist in the monitoring of progress towards MDG 5, the UN's Maternal Mortality Estimation Inter-Agency Group (UN MMEIG) consisting of World Health Organization (WHO), United Nations Children's Fund (UNICEF), United Nations Population Fund, World Bank Group, and United Nations Population Division (UNPD), regularly produce estimates for maternal mortality, focusing on country specific estimates going back to 1990. (2,3,4,5,6,7,8,9) UN MMEIG uses a modeling approach which ensures comparability across

different data sources and countries but does not necessarily match with the official statistics of the countries. As part of ongoing efforts, the WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division updated estimates of maternal mortality for the years 1990, 1995, 2000, 2005 and 2015.

The MMR estimates made by the UN Maternal Mortality Estimation Inter-agency Group (UN MMEIG), from the year 1990 to 2015 are shown in [Table 1](#). Please make a note that based on some additional analysis, the data for 1990 was revised to 556 which was 560 earlier. (10)

The Ministry of Health and Family Welfare uses the maternal mortality data by the Registrar General of India's Sample Registration System (RGI-SRS) which is based on estimates on a birth cohort. Due to the sample sizes involved, MMR estimates can only be available every third year. In the RGI-SRS, MMR is estimated for different States in India but the northeastern States except Assam, Jammu and Kashmir, Himachal Pradesh, Delhi and Goa are not included in the survey because of sampling issues.

The national estimates of MMR as per the RGI-SRS have been reported since 1997 and are shown in the

[Table 2](#) Since the RGI –SRS data is not available for the year 1990; there has been always a difference in opinion regarding the baseline value for monitoring the MDGs.

The Ministry of Health and Family Welfare uses the UN Interagency Monitoring Group estimate for 1990 which is 556. The Ministry of Statistics and Programme Implementation (MoSPI) instead of quoting the MMR of 560 in the year 1990 estimated a MMR of 437 per 100,000 live births based on the National Family Health Survey-1. (10, 14)

Therefore, MDG 5A target set at 75 %reduction in maternal mortality by 2015 becomes 139 and 109 respectively from the baseline value of UN MMEIG and MoSPI. (10, 14)

As per the Sample Registration Survey (SRS) bulletin released in May 2018, the Maternal Mortality Ratio (MMR) in India has declined to 130 in 2014-2016 and thus India achieved the erstwhile MDG 5, a target of reducing MMR set at 139 by the UN MMEIG. Ideally, the data source for the target and monitoring the progress should be the same, the UN MMEIG estimate for the year 2015 i.e. MMR of 174 against the target of 139 make the comparison statistically more precise.

Leaving apart the statistics, if we look at the current SRS figures of 130, it's quite an achievement and a reason to celebrate for India.

12,000 fewer maternal deaths in 2016 as compared to 2013, with the total number of maternal deaths declined from 44,000 to 32,000; this means that every day 30 more pregnant women are now being saved in India as compared to 2013. (13)

The decline has been most significant in EAG States and Assam from 246 to 188. Among the Southern States, the decline has been from 93 to 77 and in the other States from 115 to 93.

Uttar Pradesh with 30% decline has topped the chart in the reduction of Maternal Deaths.

Three states have already met the SDG target for MMR of 70 per 100,000; these are Kerala, Maharashtra and Tamil Nadu, while Andhra Pradesh and Telangana are within striking distance ([Table 3](#)). Globally, the annual number of maternal deaths per 100,000 live births dropped by 44 per cent between 1990 and 2015 — from 385 to 216 (UN interagency estimates). During the period 1990–2015, the

decline for the South Asian region was 67% (UN interagency estimates). (10)

#### **Rate of decline**

It is also worth noting that sharper rates of decline have been noticed in recent years. A graphic presentation of MMR figures along with corresponding annual decline rate in MMR is shown in Fig-1; the rates of decline have been calculated on basis of the MMR estimate being at the mid-time point. Maximum decline rate of 8% was observed from the year 2012 to 2015. (11-13)

The journey goes back to year 1990, which is taken as the base year for measuring the MDG achievements after 15 years i.e. 2015. The success can be attributed to the investments made by the government both at demand and service delivery sides in the last few years. National Rural Health Mission (NRHM) launched in 2005, a meticulously designed programme with lots of emphasis on bottom up planning, augmenting human resource including programme management personnel till district level and flexible funding, became path breaking in rejuvenating the public health system in the country.

Demand side financing schemes including JSY became the driving force to increase the number of institutional deliveries by 78.9% in 2015-16 from 38.7% in 2005-06. (15)

Increased number of births handled by Skilled Birth Attendants (SBAs) at the facility backed up with referral mechanism including linkages with the Comprehensive Emergency Obstetric and Newborn Care Centres (CEmONC) centres probably contributed the most in reducing maternal deaths in the country. However, prevailing inequities and inadequate quality of healthcare remain the concerns.

It is believed that India has to keep the momentum and continue prioritizing the maternal and reproductive health care services to meet the future commitments including Sustainable Development Goals (SDGs). Gol's new initiatives like Ayushman Bharat, health and wellness centres, Anaemia Mukta Bharat, Poshan Abhiyaan, Labour Room Quality Improvement Initiative (LAQshya), Prime Minister Safe Motherhood Initiative (PMSMA) seems to be promising platforms for delivering comprehensive, client centric, quality care to the mothers and children and achieve national and global commitments.

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## Tables

**TABLE 1 UN MMEIG ESTIMATES OF MMR IN INDIA**

Year	MMR
1990	556
1995	471
2000	374
2005	280
2010	215
2015	174

**TABLE 2 RGI - SRS ESTIMATES OF MMR IN INDIA (11-13)**

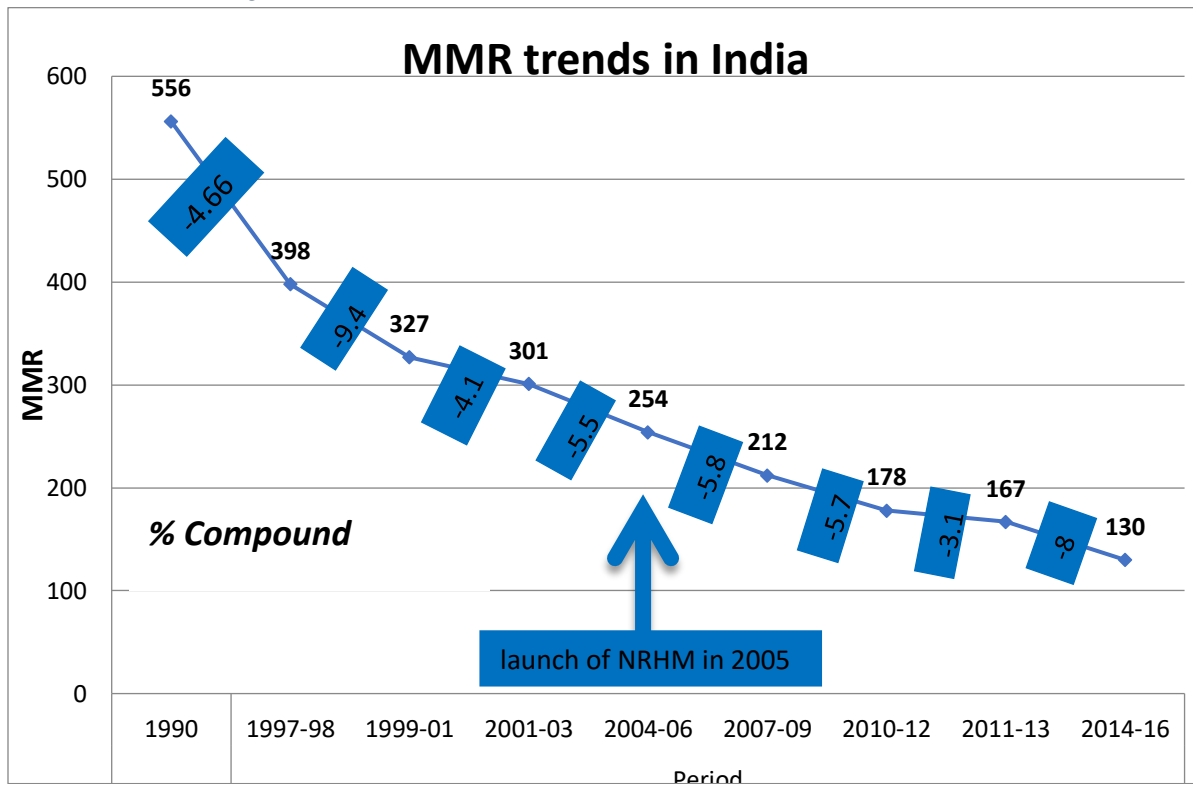
Year	MMR
1997-1998	398
1999-2001	327
2001-2003	301
2004-2006	254
2007-2009	212
2010-2012	178
2011-2013	167
2014-2016	130

**TABLE 3 STATE WISE MMR AND ANNUAL DECLINE**

State	MMR (2011-13)	MMR (2014-16)	Percentage decline
India	167	130	22
Assam	300	237	21
Uttar Pradesh/ Uttarakhand	285	201	29 (highest decline)
Rajasthan	244	199	18
Odisha	222	180	19
Madhya Pradesh/ Chattisgarh	221	173	22
Bihar/Jharkhand	208	165	21
EAG and Assam	246	188	23
Andhra Pradesh	92	74	20
Telangana	-	81	-
Karnataka	133	108	19
Kerala	61	46	25
Tamil Nadu	79	66	16
South Subtotal	93	77	17
Haryana	127	101	20
Gujarat	112	91	19
Maharashtra	68	61	10
Punjab	141	122	13
West Bengal	113	101	11
Other States	126	97	23
Other Subtotal	115	93	19

**Figures**

**FIGURE 1 MMR TRENDS IN INDIA**



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